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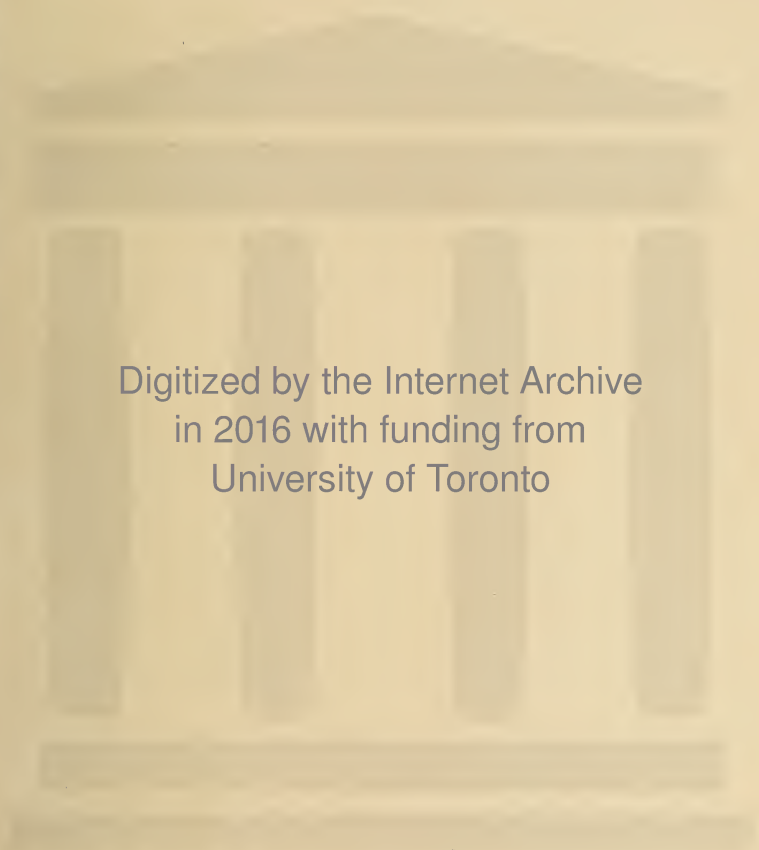
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LIPARIS LŒSELII RICHARD.

THE BIOLOGICAL REVIEW OF ONTARIO.

Vol. 7

TORONTO, APRIL, 1894.

No. 2.

MAMMALOLOGY.

THE AMERICAN PANTHER IN CANADA.

Felis concolor, LINN.

THE Panther is still found in the mountains of British Columbia, on Vancouver and probably on other Pacific islands, near the coast.

The specimens, of which we have certain evidence as occurring in Ontario in the early part of this century, may have been remnants of the race, or they may have been adventurers from the south.

But there can be little doubt that up to about the close of the last century the Panther was a native resident species in this Province, as also in the Province of Quebec.

The climate of southern Ontario is as mild as that of New York State. There were rocky escarpments and ravines, magnificent forests, open glades, marshes and cedar swamps, abounding with deer, beaver, racoon, wild turkeys and other game, their usual prey, forming altogether a habitat suitable for the development of the species.

The Panther literature of the United States is very copious and complete; in periodicals, in Washington and in State reports, in monographs, and in many other excellent general works, treating more or less of natural history. But in Canada

there is a remarkable scarcity of published matter, and the tales of hunters and early settlers, current everywhere half a century ago, were, unfortunately, indefinite as to locality and date, and generally unreliable.

The advent or extinction of a species in any habitat is always of scientific value, more especially such a large and formidable animal as the Panther. Of course it is evident such an animal must disappear with the clearing away of forests and the settlement of the country. It is believed to be now extinct in the States of Pennsylvania and New York, where formerly it was a well-known resident species. It became extinct in the State of Ohio about the beginning of this century; it would appear the last authentic record is 1805.

It will be our endeavour to collect what we can of the meagre and scattered information, documentary and oral, bearing on the occurrence of the Panther in Ontario, and to edit and publish what may be deemed worthy of record.

So far we have been fortunate in securing valuable papers, given in this number, from Messrs. Doel and Calcutt, and we would again earnestly appeal to all who have any information on this subject to communicate the same to us, so that it may not be lost forever to the Natural History of our Province.

THE PANTHER IN CANADA.

BY THE REV. JOHN DOEL.

SOME time ago you requested me to write an account of the mounted specimen of the American Panther (*Felis concolor*), which I had at one time in my possession.

When I was a boy going to school, about 1830, there was a taxidermist in York (Toronto) by the name of Wood, who had a very respectable collection of stuffed birds and animals. We boys, whenever we got a dead bird or a squirrel, would take it to him, and he rewarded us by showing us his museum. This collection was afterwards purchased by Chas. Fothergill, at this time Queen's Printer, residing in the town of York (Toronto); after his death all of his collection was deposited, for safe

keeping, in a house on York street, near King street. Shortly after, this house and its contents were destroyed by fire; the stuffed panther and a few other things, which were rescued, were left in my charge, and which I kept in my father's brewery, on Bay street, until it was destroyed by fire in 1843 (?). The panther was a fine large one, and was shot in the Township of Scarboro.

From 1822 to 1827 my father kept a house of entertainment for farmers—but kept no liquor. The Doans and Wilsons, of Whitchurch, the Reesors and others, of Markham and Scarboro, would meet there in the evenings, and they often talked of their adventures with wolves, with bears and with other animals. They frequently referred to the depredations of a catamount or panther which had been prowling through these townships, but more especially the Township of Uxbridge, which at that time, about sixty-five years ago, was almost an entire wilderness. If I remember aright, one of these men had an encounter with the catamount, and had killed him. I do not now remember which of the men it was. I was about ten or twelve years of age at this time, full of boyish curiosity, and would sit up until midnight, when permitted, listening to these tales of backwoods adventures. These farmers would naturally call the Panther Catamount, as some of them and their fathers came from Pennsylvania, where the popular name of the beast is "Catamount," as it is also in the Catskill and Alleghany Mountain region.

I remember reading, some years since, an account of one killed on the Alleghany Mountains which weighed 240 lbs.—half the weight of an African lion; this must have been a large and powerful animal.

I have always been of the opinion that the Catamount, spoken of by these farmers as having been killed by one of them, was the specimen which for some time was in my keeping; probably killed some time before 1820, sold to Mr. Wood and mounted by him.

While writing about the Panther I will give some further information, from personal recollections, and from what I have gathered from several sources.

I remember of hearing about this time (1826) of a man of the name of Burkholder—I am not sure of the name, but the circumstance I remember perfectly—who, on going home one night from York, was attacked by a Panther on Baldwin's Hill, near Yonge street. He had a desperate fight with the beast, but he was a courageous and powerful man, and by using a heavy stick he succeeded in beating it off, but his clothes were torn to pieces, and he was so badly hurt that he had to come back and stay for some time in York before he was able to go home. This man, Burkholder, was most likely one of the early settlers of York Township, and the incident may have occurred some time after 1812.

I think it is somewhere about forty years ago that a woman residing in Thornhill (about twelve miles north of Toronto) was working in her garden very early one morning, and was terribly frightened at seeing a very large, fierce-looking yellow animal jump over the fence, run across the garden, jump the other fence and disappear in the woods. She gave the alarm, and a hunt was immediately organized. They followed him all day and saw him several times, but could not overtake him; he was making his way to the big swamp.

In the year 1853 I was preaching on the Crosby circuit, and Mr. Thomas Leggett, a farmer of Crosby Township (County of Leeds and Grenville), with whom I was boarding, gave me the following information: "Several years ago (1847?) I was going to visit my brother John one morning in the fall of the year, and just as I was about to cross the bridge, I heard a strange noise behind me. I turned sharp around, and saw a large yellow animal coming towards me. As soon as I turned to face it, it stopped and crouched down, ready for a spring, but I stood still and faced it, when slowly it rose up and walked around, trying to get behind me, which it could not do owing to the creek. It walked backwards and forwards several times, then turned around, threw up its long tail and disappeared in the woods. I was very much frightened, for I knew that I had the terrible Panther before me. I knew that if I ran away he would be upon me in a moment."

Mr. John Singleton, also a farmer in Crosby, living near Mr.

Leggatt's, told me that in the next fall to the one referred to by Mr. Leggatt (1848?) he and his brother went into the woods one evening in search of the oxen, which had strayed away. Each took a different direction, and it was getting quite dark when he heard a loud cry, and, thinking it was his brother calling to him, he answered the call. In a few moments the cry was repeated much nearer to him; he then knew it was the Panther, and he took to his heels as fast as he could towards the clearings, the animal following him closely until he came to the public road, when he heard no more of it. His brother had got home some time before, having found the oxen. Later in the fall, one beautiful moonlight night, he was awakened from his sleep by hearing his dogs barking savagely while running up the lane towards the house, evidently chased by some animal, and, knowing the dogs were not cowardly, he concluded something serious was wrong, and arose out of bed, and on opening the door he saw the dogs run into their kennel under the house, closely pursued by a large yellow animal with a long tail. The opening of the door attracted the beast's attention, and prevented him from following the dogs under the house. It was but the act of a moment to seize his always loaded rifle and fire at the animal, which then gave a frightful scream and ran around the end of the house and jumped into the woods, but he could not say whether it was wounded or not. The scream was the same as he had heard in the woods when searching for the oxen, only louder and wilder.

He also stated that the beast was very troublesome to settlers in the Township, running cattle and sometimes killing pigs, sheep and young cattle. One evening his cattle came galloping home looking terribly frightened, and blowing as if from a long chase, and it was seen that a yearling heifer was terribly torn on the flanks and rump by the claws of some large animal.

The statements of these men were perfectly reliable; they were industrious, substantial farmers, and good, truthful Christian men.

In the same year (1853), while on the rounds of my circuit, I went to the house of a good Christian family to stay for the night. They told me that a farmer, whose name I have for-

gotten, living about four miles from them, was terribly frightened a few days before, by a large wild animal. He had been to Brockville on some business, and on his return journey he stopped at this house, rested, had supper and also hay and oats for his horse. He started for home about ten o'clock in the evening; it was a beautiful, bright moonlight night; he was perfectly sober, as he did not take any intoxicating drink. He was riding along at a gentle trot when, nearing a bridge across a stream, in a deep hollow, his horse gave a loud snort, suddenly stopped, reared up, swerved around, almost throwing him off. On looking in the direction indicated by the actions of his horse, he saw a large yellow animal, with a long tail, crouching by the side of the road, not many yards away. On his making a threatening gesture towards it, and giving a loud yell, the animal got up, looked at him for a moment, and then bounded into the woods. The horse was so frightened that he became unmanageable, and galloped back to the house from which they had started, when it was plain both man and horse were both very much frightened. This occurred in the Township of Ops.

I called to see this farmer soon after he had this adventure, and he gave me a very full account of it, many particulars of which I have omitted.

I offered an old hunter ten dollars if he could get the animal for me. He found the track several times, but it was always lost in the big swamp, known as Pigeon Creek Swamp, a broad and dismal swamp running through several townships.

I called at a farm house on the Ops side of the swamp, and the farmer asked me if I had heard anything while coming through it, which I had not. He said, "Last night something took a hog from my very door. Yon swamp is a terrible place; what terrible screams I hear down there almost every night!" (1853).

I remember reading in the *Toronto Globe*, about four years ago, an account of the killing of a large animal of the cat kind—I think in the Township of Malahide—which measured over six feet in length. It was an animal of a kind never before seen up there. It could not have been a lynx, for they were common there, and besides I never knew of one over four feet in length.

Just before the Rev. Mr. McDougall, Methodist missionary in the far west, came to his tragic death, he wrote a letter for the *Christian Guardian*, giving an account of the work on Morley Mission, and in which he stated that his son had shot a very large Panther, measuring above eight feet in length.

You will see by the accompanying slip, which I cut from the *Toronto Evening Telegram* of January 4th, 1884, that a very large one has been killed lately in Ontario.

"On Tuesday morning last week Mr. T. W. White, of Creemore, captured a large wild cat measuring nine feet from tip to tip. He learned that one had a nest in a hay stack a short distance from there, and set a gun in the entrance with a piece of meat attached in such a way that as soon as it was pulled, the gun would discharge its contents in that direction. The plan worked beautifully, and Mr. White secured his game."

It would then appear that the Panther has been known by the early settlers as a pretty well known resident over a large portion of the Province.

"THE COUGUAR."*

"Cougar—My specimen measured in its total length 6 feet 10 inches, of which the tail alone was 2 feet 3 inches."

"There appears to be two kinds by those exhibited in the show in Whitby, 1835, which had small heads and a black patch on each cheek."

AMERICAN PANTHER.

By JOHN CALCUTT, 1885.

About forty-eight years ago—I cannot fix the date more accurately, but I remember it was not long after the rebellion of '37—a gentleman farmer (Dr. Jas. Pringle, formerly in the East India Company's service in India) came into the town (Cobourg)

*Extract from MSS. Diary of Chas. Fothergill. Page 56. Now in Toronto Public Library.

with the alarming intelligence that one of his cows had been killed and partly eaten by some wild animal, which he had reasons for believing was a panther. As he had been accustomed to hunting tigers, wild boars and other beasts in India, his opinion and judgment was treated with respect, yet we could not account for the appearance in the neighbourhood, only a few miles north of the town, of animals powerful enough to kill and drag a cow nearly half a mile, and half way up a very steep hill on the farm where it was afterwards found.

He told us that when he saw the cow dead and torn he came to the conclusion, from various observations, that it was killed by neither a bear, lynx or wolf, but he believed it to be by a panther or catamount. He said he spent a large portion of the night in a tree not far off, with his rifle, watching in the hope of getting a shot, but the animal, or whatever it was, did not reappear while he was there; but the next morning the cow had disappeared, and he traced it to where it had been dragged.

His chief object in coming to the town was to beat up recruits amongst his friends for a general hunt, in the hope of finding and killing his dangerous neighbour before any further harm could be done.

We eagerly acceded to his request. There was a spice of danger in the enterprise, and he soon obtained a dozen resolute fellows, ready and willing to risk their lives in search of adventure.

The next day we started bright and early for the general rendezvous at his farm house, and soon afterwards commenced our tedious tramp.

We searched the dense woods, deep, dark swamps, and every place of concealment in a circuit of many miles, but without effect. We came upon one place where it was plain to be seen some animal of the cat species had been sharpening its claws, for a tree had been torn and the bark scratched in many places. We walked all day, and examined as well as the nature of the dark forest and thick foliage would permit, and returned at sundown, tired, weary and disappointed, to partake of a splendid dinner provided for us by our hospitable host.

I cannot remember the names, at this distance of time, of

those present at the hunt except Dr. Pringle himself, Henry Hayter, son of Lieut. Hayter, R.N., and Mr. Rowe Buck; Henry Hayter, because he brought a yelping mongrel that many a time we thought was a means of alarming and driving away the animal we were seeking; and I recollect Rowe Buck because, while waiting for dinner to be served, he proposed we should all discharge our guns before going into the house, and he stuck up a silver half-dollar, and offered to give it as a prize to whoever could knock it down at the distance marked out. Many of the party had rifles, one or two shot guns loaded with ball, and each fired in turn without hitting so small an object. I came last. I had a capital English made double-barrel, that had often served me well in similar trials of skill, and I succeeded in hitting and knocking down the piece of money without difficulty, but Rowe Buck objected to giving it on the flimsy excuse that my gun must have been loaded with shot, and because, forsooth, all the others had failed. To convince him, I dared him to put it up again, and, on his declining to do so, I set up in the same place a piece of white china of the same size, which I smashed to pieces with the bullet of the other barrel.

This circumstance and Henry Hayter's little dog, perhaps, is what has fastened these two names upon my memory.

Every one of that jolly party, I believe, are dead, except Rowe Buck and myself, and he is well advanced in years, but he may possibly remember the occasion of the hunt, if any corroboration of this story is required. Mrs. Pringle, too, wife of Dr. Pringle, and sister of Rowe Buck, is also still alive.

Soon after the murder of Captain Ussher at Queenston, and the blowing up of Brock's Monument by the notorious Benjamin Lett, a descent was made in the neighborhood of Cobourg by a large party of marauders for the purpose of murder and plunder, led by this celebrated outlaw. I was invited to join an expedition sent to arrest them, and we succeeded in capturing the whole lot except Lett, who escaped.

It was in one of the night excursions, despatched every evening for a long time afterwards, in the endeavour to take this dreaded maurauder, that returning one morning, as we

passed near the farm where the hunt took place, about the dawn of day, we were suddenly startled by hearing the most frightful screams in a thick, dark, swampy forest we were passing. I knew in a moment that they proceeded from a Panther, or a beast of the same kind, and we at once came to the conclusion it was the animal that had killed the cow. The cries of the brute were appalling; anyone that had ever heard the screams of a Panther could not be mistaken when listening to these frightful yells.

Time passed. Farmers that lived in fear and trembling of a visit from this dangerous fellow began to be less alarmed, when one day a gentleman who lived some five miles east of Cobourg, on the shores of Lake Ontario, came into town and said that he had seen traces of the Panthers again. He said he came upon a ravine on his farm where he particularly noticed their tracks, and at one place where a leap had been made across a distance, by actual measurement, of twenty-three feet. He said his hounds appeared to be frightened, to go about trembling, and cowering at every noise. From these circumstances he was satisfied they were not far off, and he proposed another hunt. While waiting to fix upon a convenient day and collect a party, news arrived that a couple of Panthers had been shot near Grafton, a few miles further on. This settled the question; there were no more doubts as to the species of animals the marauders belonged to, for there they were, veritable American Panthers.

I have heard since then many disputes as to the existence of Panthers or catamounts in Canada, but the foregoing is not the only instance of their presence in this country that has come under my notice and observation. It must be remembered that in those days there were dense forests, dismal swamps, and it was not unusual to hear of the visitations of bears, wolves and lynx.

I give this story for what it is worth; I merely relate my own experience; but no one could persuade me that a lynx was powerful enough to drag a large, heavy cow, the long distance from where she was killed, to where we found her afterwards. From what I heard, saw and know, I believe I am correct in every particular.

THE PANTHER IN ONTARIO.

BY WM. BRODIE.

FROM about 1840 to 1843 tales of the appearance and depredations of a Catamount were current in the northern part of the County of York.

The animal,—for it was not said there was more than one—it seemed, ranged over a wide area, from the central part of the pine ridges of Whitchurch, then an unbroken forest, down to certain cedar swamps in the Township of Markham, and through the Townships of Uxbridge and Pickering to Frenchman's Bay and the banks of the Rouge.

It would seem that the animal did not remain very long in any locality, for every month or so, stories of its screams being heard, of its being seen running cattle at night, of its killing and eating sheep, pigs and calves, were current at quite distant parts.

The settlers at this time were quite familiar with bears, wolves and lynx. These animals were frequently seen, shot and trapped. I remember standing at the door of the old homestead in Whitchurch, listening to the howling of a pack of wolves. He was not much of a backwoods man who could not diagnose the "signs" of these animals, but there was a unanimous agreement among settlers and hunters that the animal which uttered these "blood curdling" screams, which killed and eat sheep, pigs and young cattle, often dragging the carcasses long distances, was neither bear, nor wolf, nor lynx.

At this time there resided on Lot 3, 4th Con. Whitchurch, a farmer and tanner named Andrew Brillinger. Andrew, as well as being a farmer and a tanner, was a hunter and trapper from boyhood, an unerring rifle shot, quite familiar with the woods and the habits of all our native wild animals, having frequently shot and trapped lynx. About midsummer, 1839 (?), Andrew was hunting for a buck in a very dense cedar swamp, on the rear of Lot 6, 3rd Con. Whitchurch, by the margin of old Simon Teel's Lake, when he came suddenly face to face, at a very short distance, with a beast which, to his dying day, he asserted was a lion. He was so very much frightened that he dared not fire, believing the lion would attack him in case it was only

wounded, so he backed away, the lion still sitting on his haunches looking on, and made his exit from the swamp as quickly and quietly as he could. Andrew ran to the nearest farm houses, gave the alarm, and a hunting party was speedily organized, but, as it was getting towards nightfall, they thought it wise not to enter the swamp that day, but to meet in the morning with an increased number of men and dogs. This was done, and the neighbouring swamps and woods hunted through, but the lion was neither heard nor seen.

No one ever doubted Andrew's story, for he was well known as a truthful and upright man, but as he positively asserted it was a lion which he saw, it was thought he was mistaken in his identification. He had seen lions in a menagerie, and might readily mistake the Panther for a lioness.

About the same date, 1839, as near as it is possible to fix it, David Baker had commenced a clearing on Lot 12, 8th Con. Whitchurch. There was not a dwelling house on the lot, and he made his home at his father's, about a couple of miles distant. On returning from his work one evening, he saw what he said he knew to be a "painter." The animal was lying on a fallen pine tree, close by the footpath; the head was erect, and Baker saw it was looking intently at him. He saw a movement of the tail, which was hanging over the side of the log towards him; it did not shew the slightest sign of fear, and he was within thirty yards of it. At the first glance he thought, from the colour of the beast, it was a deer. He was carrying his trusty rifle in his hand, but "in a moment of weakness" he decided not to fire, for fear the animal would attack him in case he failed to kill it at the first shot, and so he turned and made a near cut to the nearest clearing, and he did not think it followed him.

David Baker became a well-known, worthy Whitchurch farmer, a truthful and reliable man. I knew him intimately, and was often out hunting in his company. He was well acquainted with the habits of bears, wolves and lynx, being an adept at shooting and trapping them, and could not be mistaken in his identification of the animal. I last saw him in the autumn of 1891, when he was on his way to Michigan, where I believe he is now residing.

ORNITHOLOGY.

GENERAL NOTES FOR 1891.

BY C. W. NASH.

Turdus mustelinus.—On the 7th September I took a female of this species in North Toronto, and during the summer saw five or six others.

Cistothorus palustris.—This species is exceedingly abundant in all the marshy inlets of Lake Ontario. I saw and heard the first on April 28th; it was singing vigorously. The bulk did not arrive until May 14th, when they swarmed in their usual haunts.

On May 27th, I found the first nest; this was not quite complete, but nearly so. On June 5th I found another nest containing four eggs, which is about the average number they lay in this locality.

During the season I examined the stomachs of a good many, and found them always filled with the remains of small beetles.

Towards sunset these birds have a curious habit of shooting straight up in the air, and then gently descending, at the same time uttering a very pretty warbling song.

Troglodytes hiemalis.—These birds are generally said to spend the summer to the north of us, but this season I found two pairs nesting within a few miles of the city; in both instances they selected a dark, cool and damp ravine for their home, and in each case successfully brought out their young.

Anthus pensilvanicus.—As usual these birds appeared in large numbers this fall; the first arrived October 9th, when I saw one flock flying over. From that date I saw them daily until October 30th, when the flight ceased.

Helminthophila ruficapilla.—This species was very abundant in the neighborhood of the city, in the spring migration; the

first appeared May 18th, on which day they were common. I think a few remained here to breed, for though I found no nests, yet I saw specimens occasionally all through the summer.

Helminthophila celata.—I took a male of this species May 15th, the only one I saw; it is very rare in Ontario.

Helminthophila peregrina.—A female taken May 18th the only one seen; this species occurs even less frequently than the last.

Dendroica maculosa.—This species occurs regularly, and is rather abundant here in the spring, but their stay is of short duration. May 14th I saw the first, a few males, on the 18th they were abundant, both sexes together, and on the 23rd all had left, but a few scattered females.

Dendroica palmarum.—I have usually found this warbler fairly well represented throughout the Province, but this season I saw only one, which I took near Toronto, May 15th.

Seiurus noveboracensis.—On May 8th I took one, and on August 8th I took another; besides these I saw at least five or six others in the spring. In the autumn I saw only the one taken August 8th.

Lanius ludovicianus.—Twenty years ago this bird was common throughout western Ontario and the Niagara Peninsula, but of late years they have apparently almost abandoned the Province. This season, however, I found three pairs nesting near the City, all of which took off their broods safely. The first appeared May 7th, and they left almost as soon as the young could fly well; the last I observed July 10th, an immature bird.

Calcarius lapponicus.—Rather an unusual number of these birds visited this neighborhood this autumn; on the 10th of October I saw a few small parties of them; from that day until the 26th, I saw several large flocks daily; these flocks were composed of Longspurs only. On the 29th of October I saw the last of them; this was a single bird, with a flock of Snow Buntings.

Passerella iliaca.—In the spring migration I saw several of these somewhat uncommon birds, the first April 12th. In the autumn only one was seen, this I took October 23rd.

Scolecophagus carolinus.—I found these birds abundant, both in the spring and fall migrations, this season. In spring, the first appeared April 6th, and the last was observed May 8th, a rather late occurrence. In the autumn the first were seen October 6th, and the last October 27th.

Quiscalus quiscula æneus.—These birds have greatly decreased in number during the last twenty years; now I know of only three colonies breeding within the city limits, and they are very small. This season the first appeared April 14th, a transient flock of about fifty. On the 16th, I found them occupying one of their old breeding places in full force; here they remained until June 13th, when they took off their young and entirely disappeared for the season. I did not see a single one after that anywhere near Toronto; possibly they have learned, from bitter experience, that it is not a healthy place for their children to grow up in, for they certainly remain in other parts of the Province until the end of October.

Trochilus colubris.—This species was very abundant here this season, particularly during the time of the blossoming of the Water Balsam, *Impatiens fulva*, which they much frequent. The first appeared May 8th, and a few remained here and bred, the great increase in their number occurring about August 15th. I examined the stomach contents of a large number during the season, and found them invariably filled with insects. The Entomological authorities at Washington identified some of these for me, and amongst others found they consisted of *Bythoscopus* (order *Hemiptera*), a species of *Entedon* (family *Chalcididæ*), small gnats and spiders; and in one a small quantity of sharp sand. I also noticed, that if pressure is exerted upon the breast when a bird is killed, that a drop of clear and sticky fluid is exuded from the beak; this is no doubt honey; but the essential food of these birds is undoubtedly insects, and I think that the greater part of these insects are taken by the birds from the trunks of pine trees, around which I have frequently observed them hovering, particularly early in the morning and towards evening, and usually at some height up the tree.

Coccyzus americanus.—Nearly every season is marked by the

unusual scarcity or abundance of certain species of birds ; thus, the summer of 1889 produced a comparative abundance of this usually rather rare bird, but this season (1891) I was only able to positively identify it once, when on June 24th I took a female.

Phalaropus tricolor.—On July 21st, I took a female of this species, which is somewhat rare in this Province ; its occurrence at this date, too, is peculiar.

Micropalama himantopus.—July 18th, I took an adult female, and on the 28th, an adult male. This is one of the few birds that is not known to be common anywhere in America.

Rallus virginianus.—On the 6th of July, I found a nest of this bird's, containing thirteen eggs ; these had no doubt been deposited by two females, as eight of them were far advanced in incubation, the other five being almost fresh, only very slight blood marks showing ; they were arranged in two layers in the nest.

Phalacrocorax dilophus.—April 24th one of these birds flew close past me on Ashbridge's Bay ; its occurrence so near Toronto is unusual.

Sphyrapicus varius.—I notice in the last publication issued by the Ornithological sub-section that Mr. J. B. Williams, referring to this species, says : " I find from records that these birds arrive here about the 14th of April, and almost disappear about the 18th." This differs from my experience in the vicinity of Toronto most materially. The date given for the arrival accords with my notes exactly ; but I have always found them quite common up to about the 24th of May, and this season I found at least six pairs breeding here, and saw them with their young after they were brought out.

I have examined the stomachs of a good many of these birds, but have never in that way been able to discover any evidence of their alleged sap sucking propensities, nor have I ever found any trace of fruit in any of them ; their favorite food seems to be ants and beetles, with the former of which they are generally well filled.

BIRDS OBSERVED BREEDING IN THE VICINITY
OF TORONTO DURING THE SEASON OF 1892.

BY JOHN JACKSON.

Corvus americanus.—(April 24.) Nest placed in an oak tree, about forty feet from the ground; composed of sticks and twigs, lined with hair, vinebark and dead leaves. It contained five fresh eggs. Average size, 1.70 x 1.17.

(May 24.) Nest almost identical in construction with the preceding, placed in a pine tree about thirty feet from the ground, containing five eggs, slightly incubated. Average, 1.62 x 1.18.

Porzana carolina.—(May 11.) A nest of this species was found in Ashbridge's Bay containing three eggs, but on visiting it about a week later the nest and eggs were found destroyed, owing to a sudden rise in the water of the locality.

Cyanocitta cristata.—(May 15.) Nest placed in a red pine tree, about twelve feet from the ground, composed of sticks, twigs and scraps of paper; lined with finer twigs and plant stems. It contained four fresh eggs. Average, 1.10 x .82.

(May 22.) Another nest of this species was found in a pine tree, about eight feet from the ground, containing four eggs far advanced in incubation.

Falco sparverius.—(May 18.) A nest of this species was located in a hollow birch tree, about twenty feet from the ground. The cavity was about eighteen inches in depth, and contained three fresh eggs, which were laid on the bare wood. Average, 1.37 x 1.07.

Pipilo erythrophthalmus.—(May 22.) Nest placed in the ground under the shadow of an overhanging bush; composed of dead leaves and weed stalks, lined with fine dry grass and plant stems. It contained three fresh eggs, averaging .97 x .75 in size.

Turdus fuscescens.—(May 29.) A nest of this species containing two eggs, located in an evergreen bush about three feet from the ground, but upon visiting it later both nest and eggs were found destroyed.

(June 25.) Nest on the ground at the foot of a small bush ; composed of leaves and vine-bark, lined with fine black rootlets and plant stems. It contained three fresh eggs, averaging $\cdot 88 \times \cdot 70$ in size.

Chaetura pelagica.—(June 7.) Nest formed of coarse twigs, fastened together with the saliva of the birds, placed in an unused chimney of a house in the suburbs of the city. It contained five eggs, slightly incubated. Average size, $\cdot 82 \times \cdot 54$.

Ardetta exilis.—(June 12.) Nest—very compact for this species—placed in a clump of green rushes,* composed of small rushes and reeds, with a thin lining of finer pieces of the same. It contained four fresh eggs, averaging $1\cdot 23 \times \cdot 94$. This species evidently rears two broods in the year in this locality, as I have found eggs as late as August.

Actitis macularia.—(June 16.) Nest—a shallow depression in the ground, near the lake shore—thinly lined with grass, containing four fresh eggs, averaging $1\cdot 28 \times \cdot 95$.

Ægialitis vocifera.—(June 18.) Two nests, or rather nesting sites, of the Killdeer were found on Toronto Island, one containing four, and the other, one egg. In both instances the eggs were laid in a slight depression in the gravel, no other sign of a nest being visible.

Vireo olivaceus.—(June 19.) Nest composed of strips of bark and flexible plant stems, lined with a little fine dry grass, and fastened by the rim to a young oak sapling, about seven feet from the ground. It contained three fresh eggs, averaging $\cdot 84 \times \cdot 60$.

Myiarchus crinitus.—(June 22.) A nest of this species was found in the suburbs of the city, placed in the hollow of a live apple tree, about twelve feet from the ground. The cavity, which was about ten inches in depth, was lined with fine grasses and plant stems, and contained five fresh eggs, averaging $\cdot 92 \times \cdot 67$ in size.

Chordeiles virginianus.—(June 28.) Two eggs of this species were found laid in the gravel on the flat roof of a house in the outskirts of the city, averaging $1\cdot 20 \times \cdot 86$.

Contopus virens.—(July 1.) Nest placed on the horizontal limb of an apple tree, about twelve feet from the ground, formed

of weed stems and grasses, and externally covered with lichens. It contained three fresh eggs, averaging $.74 \times .59$.

Junco hyemalis.—(July 19.) A nest of the Junco was found in the side of a bank in the ravine at the back of St. James' Cemetery. It was formed of grasses and plant stems, lined with hair, and contained four eggs, which were far advanced in incubation.

The following were also observed breeding, but no records were kept: *Merula migratoria*, *Melospiza fasciata*, *Melospiza georgiana*, *Spinus tristis*, *Galeoscoptes carolinensis*, *Harporhynchus rufus*, *Seiurus aurocapillus*, *Gallinula galeata*.

GENERAL NOTES.

CARPODACUS PURPUREUS.

(March 3, 1892.) I should like to report an unusual migration of purple finches this winter. They appeared in the Asylum grounds on January 28th. One of the inmates called my attention to the fact that finches had arrived in large numbers, and showed me four male finches in brilliant plumage that he had trapped. The birds were feeding on small crab apples, that had not been worth picking from the trees last fall. The birds take the pulp as well as the seeds of the crab apple. Sometimes as many as twelve finches are to be found in one tree, and, to give you an idea of the numbers here, I may say that the patient trapped nineteen in a few days, but set many of them at liberty, as he wished to retain male birds in brilliant plumage for cage pets. The finches are still with us (March 14th), although not in such numbers as at first. Yesterday four were in one crab apple tree. Both sexes are well represented. I have never known a purple finch winter in Kingston, and scarcely think that these birds have remained

with us all season. There were a few mild days about the time of their appearance, and it seemed as if they had come from the south.

(April 1, 1892.) Purple finches are still with us, and seem to be much driven to get a supply of food. They are to be seen even on the roads, picking up anything that they can find.

Kingston, Ont.

C. K. CLARKE, M.D.

Accipiter cooperi.—Mr. Spanner informs me that he has received two specimens of Cooper's Hawk. One was shot on September 18th at Scarboro', and the other on October 4th at Ashbridge's Bay. These were mature birds.

HUBERT H. BROWN.

Phalacrocorax carbo.—Black Cormorant.—A specimen was shot on the Rouge River, in the Township of Pickering, in November, 1888, by Mr. Silverthorn, the village blacksmith. The bird was handed to Mr. Swallow, taxidermist, of Pickering Village, who mounted it and held for sale for some time. He may have it still.

Port Union.

THOMAS CHESTER.

Cathartes aura.—Turkey Buzzard.—One shot near Brougham, Township of Pickering, in the summer of 1887. It was sent to Mr. Swallow, of Pickering Village, who mounted it, and it may still be in his possession.

Port Union.

THOMAS CHESTER.

BOTANY

IN READING over Mr. Frederick V. Coville's report of the Death Valley Expedition, I was very much pleased with his definition of the terms, range, locality, station and habitat. They are often misunderstood by botanists, and many have widely various meanings for them. For the benefit of those who have not access to his report, I take the liberty of quoting his remarks, as follows :

" In a discussion of the principles of plant distribution it is necessary that each term technically employed shall have a well-defined and uniform meaning. Among those words which have been used by various writers with great looseness, there are four which are of especial importance to us, range, locality, station, and habitat. One has merely to refer to our common botanical textbooks and dictionaries to find the lack of clearness in the definitions of these terms, while an attempt to use the words as defined impresses one with the necessity of reviewing their meaning.

" Of these words the one which has historic precedence is *habitat*. It has been used at various times to express the different meanings which are now conveyed by all four words, and from this fact an unfortunate confusion has arisen. Another circumstance that has contributed to the cloudy understanding of these terms is that a technical meaning, not in accord with its popular use, has been ascribed to one of them. The word referred to is *station*. This term is sometimes employed to express the kind of place in which a plant occurs ; but its historic use in the language is to indicate position merely.

" The meanings that should logically be attached to these words are as follows :

" *Range*—The range over which a type spontaneously grows.

" *Locality*—The approximate geographic position of an individual specimen.

“*Station*—The spot upon which a specimen has been collected or observed.

“*Habitat*—The character of the place in which a type occurs.

“In these definitions the word *type* is a general expression for which in particular cases variety, species, genus, or the name of any group may be substituted.”

I hope our readers will take these facts into consideration, when making collections and field notes.

NOTE.—In the proposed Herbarium, which is to be established in connection with our society, we have decided to follow the arrangement and numbering of Patterson's Check-list of North American Plants, and articles published in this journal relative to plants will have the number, according to that list, following the name of the plant heading the article.

C. W. ARMSTRONG.

RUBUS CANADENSIS (LINN.) P.L. 2968.

DEWBERRY.

THIS SOMEWHAT neglected “berry-bush” is common in southern Ontario, growing on high, dry, untilled, sandy fields and often on dry clay hills. In habit, as in habitat, it differs very much from its nearest Canadian relative, the Thimbleberry (*R. villosus*), so abundant everywhere in Ontario, in old “burn-overs,” in slashes, in neglected clearings and in open woods; the grand profusion of beautiful white flowers such a conspicuous feature in the landscape foreground, and the large glossy black fruit such a boon to the early settler.

R. villosus, in favourable situations, has a vigorous upward growth, often somewhat reclining, the upper fourth usually bent in a horizontal direction, the canes often six feet long and over half an inch in diameter at the base, are armed with strong curved hooks, like cats' claws, so very “catchy” of the pants and dresses of the berry pickers.

In the typical form of *R. canadensis*, the canes trail on the ground; they are often ten feet long, of a uniform diameter of about $\frac{1}{4}$ inch, and armed with short, weak prickles. This form does not flower very profusely, and many of the flowers are infertile or produce "nubbins."

But there is a form, a variety of this species, common on sandy situations around Toronto, not trailing, more upright than the typical form, but reclining and curving more than *R. villosus*; it comes in between the two, and is considered by many to be a natural hybrid between them. Of course this is mere conjecture, and we may safely say that the origin of the form is unknown.

It is of this form I wish more especially to speak, and to recommend it to fruit-growers as a variety suitable for cultivation, or at all events well worth a trial. It most probably was a form very similar to this, which, in the Western States, gave origin to the cultivated varieties, the Windom and the Lucretia.

Around Toronto it is quite hardy, would not require any winter protection, thrives on very barren soil. It yields more abundantly than *R. villosus*, especially when a little shaded, or when growing on a hill-side sloping to the north; the fruit is more spherical, firmer, and better flavored, and there is not so much tendency to "nubbins."

There are over twenty varieties of *R. villosus* known to fruit-growers; a few of these have been in cultivation for half a century, but most of them have originated within the last twenty years.

From *R. canadensis* some six or more varieties have been tried with more or less success, and all are of quite recent origin.

Of the cultivated varieties of the Dewberry, it has been said by a competent authority, "The peculiar merits of the Dewberries, as cultivated fruits, are earliness and attractive appearance, and the ease with which they can be protected in winter." "The peculiar demerits of the Dewberries are the failure of the flowers to set, the formation of nubbins, and the difficulty of picking the fruit."

The specimen on which Linnæus based his original description, is of the low, trailing form, and I believe is now in the British Museum.

WM. BRODIE.

NOTES FROM MUSKOKA.

Botrychium ternatum intermedium GRAY.—This is somewhat rare in this locality, and found only when sought in secluded places, under cover of bushes generally, always in damp, mossy ground. The largest specimen I have found (September 28, 1892) measures 9' in height; the average is about 6'. The spores ripen about the end of September.

Ophioglossum vulgatum L. P.L. 12735. On September 28, 1892, I found a small patch of this plant growing among raspberry bushes, on the south side of a rocky hill. There were about a dozen plants growing close together, and averaging 8' in height. I secured three, the remainder being yellow and in various stages of decay. Last year I looked for them, but there was not half the number. I know that no one had removed them.

Habenaria tridentata HOOK. P.L. 10079. On June 20, 1892, I found about half a dozen specimens growing on the margin of an ice-cold spring, in a dark cedar swamp. The largest among them measured 7' in height, the smaller ones 4' to 5'. These are the only specimens I have ever seen.

Habenaria orbiculata TORR. P.L. 10072. This is exceedingly rare; indeed, I only know of five specimens having been found in this vicinity, three of which I collected myself. These I have found in dry, shady woods, occupying a space clear from other small herbage. I have one before me now, which measures 14' in height, and bears twelve perfect blossoms. The leaves are $4\frac{3}{4}$ ' in diameter.

ALICE HOLLINGWORTH.

Falkenburg, Ont.

LIPARIS LÆSELII RICHARD.

Liparis læselii RICHARD. P.L. 10084.—Plate I.

Syn. *Ophrys læselii* LINN. SP. PL. 1341. With. Bot. Arr. 988.

O. lilifolia RELH. CANTAB. 537. Huds. Fl. An. 390.

Pseudo-Orchis bifolia palustris. Raii Syn. 382.

I found one specimen of this orchid on July 11, 1891, growing in a moist, mossy situation, facing the south on Scarboro Heights. There was only the one specimen to be seen, and it was near the top of the hillside; the soil was sandy, of a springy nature, and well shaded. Plant 8' high; leaves respectively 5' and 4½' long, by 1⅜' and 1¼' wide; it had eleven flowers; pedicels average 3", and lip 2" long; scape 5½' high; the previous year's bulb was still green and solid at the side of the present stem.

Macoun's Cat. of Can. Plants quotes it as having been found in Ontario, near Ottawa, Belleville, London, Oak Hills and Campbellford, all in swamps and bogs.

Speaking of this plant, James Sowerby, F.L.S., in his English Botany, Vol. III., 1794, says:

"Ray has mentioned this plant as the production of some moors in the neighbourhood of Cambridge; but those moors were long searched for it in vain by succeeding botanists, till the Rev. Mr. Relhan discovered it a few years ago growing, not very sparingly, where Ray has reported. This gentleman attributes its remaining so long latent, to its usual situation close to the stems of rushes.

"Mr. Pitchford many years ago found, in a meadow at St. Faith's, near Norwich, one single specimen, which he afterwards presented to the Rev. Mr. Lightfoot.

A confusion, which originated with Linnæus, has long existed between this plant and his *Ophrys lilifolia*. We can assure the public, on the authority of his herbarium, that the latter is only found in America, and that the European synonyms, which he has in several parts of his works applied to that species, really belong to ours."

Bentham and Hooker, in their British Flora, 1887, give its

habitat and range as follows: "In bogs and wet places of central Europe, from southern Scandinavia and western France to the Russian frontier. In Britain, only in the eastern counties."

C. W. ARMSTRONG.

THREE RARE GRASSES.

Leersia virginica WILLD. P.L. 12078. Culm slender, from a creeping root-stock. I found it decumbent through herbage in low wet grounds, in Castle Frank Valley on September 14, 1892.

Oryzopsis canadensis TORR. P.L. 12166. Culm cespitose; naked above, leaves involute. I found it in open sandy soil, east of Victoria Park on May 2, 1892. 8' and not more than 12' high.

Eragrostis major HOST. P.L. 11966. Culms densely tufted, geniculate; panicle, large, of flattened spiklets. I was fortunate enough to find an isolated patch of this beautiful species, in a meadow at the foot of the west bank of the Don Valley on September 1, 1891. I have watched it ever since, and it is gradually crowding the *Poa pratense* L. out around it, notwithstanding the *Poa* has the start of it in the spring.

W. H. BLASHFORD.

PTEROSPORA ANDROMEDEA NUTT. P.L. 6641.

On August 29, 1891, I was walking with some friends through Scarboro Heights, and we came upon one solitary specimen of this plant in a small ravine just east of Victoria Park, in a grove of pine (*Pinus strobus* L.). It was in fruit and had over thirty seed capsules on it. Height, $20\frac{1}{2}'$.

On July 17, 1892, I found three specimens on the high, rocky ridge, behind the town of Grimsby, on the south shore of Lake Ontario. Two of them were growing together, exactly in the centre of a triangle, formed by a tree each of *Pinus strobus* L.,

Tsuga canadensis CARR. and *Thuya occidentalis* L. The plants were growing directly on a root of one of these three trees, but I do not know which. The other plant was in a grove of *Tsugas* and *Thuyas*; they were all growing in black, loamy soil. Height, $19\frac{1}{2}$ ', 19', 18', respectively.

In the Cat. Can. of Plants, we find it recorded in Ontario at the following localities: "In the vicinity of Ottawa, Belleville, Cannifton, Meyersburg, Hamilton and Niagara Falls, and along the Humber a little west of Toronto."

Prof. Macoun is the authority for the last named locality. From his wording I presume he did not find it isolated. I never saw it myself in that locality, nor has anyone else that I know of.

C. W. ARMSTRONG.

SCHWEINITZIA ODORATA ELL. P.L. 6676.

On July 19, 1891, I found one clump of this *Erica* in the vicinity of Mr. Lea's farm, on the west bank of the Don Valley. It was growing in light, sandy soil, in second growth hardwood (mostly maple bush; the clump consisted of five stems, the tallest of which measured 10 7-16' high.

Prof. Macoun does not place this plant in his Catalogue of Canadian Plants, therefore, I might presume, he has no record of its existence in Canada. I have found it in another part of Ontario, which record I will place with this REVIEW when I have had time to work up its range and habitat during the coming summer.

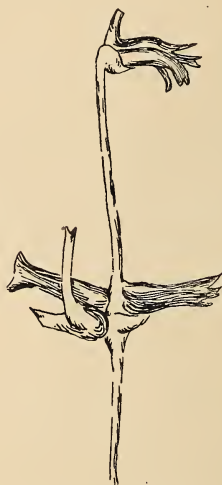
C. W. ARMSTRONG.

ENTOMOLOGY.

CANADIAN GALLS AND THEIR OCCUPANTS.

DIPLOSIS HELIANTHI, N. S.

GALLS found in the leaf axils, on the upper third of the stems, of *Helianthus decapetalus* and *Helianthus divaricatus*, growing in open woods or in shaded situations ; from 1—10 galls in an axil,

GALLS OF *DIPLOSIS HELIANTHI* N.S.

firmly attached to the stem by an expanded base, projecting in various directions, usually upwards, often at right angles to the stem and occasionally downwards ; galls from 10—25 mm. long, and from 1.50—5 mm. in diameter, curved more or less regularly from a radius of 10 mm. to nearly straight, usually more or less cylindrical, occasionally flask shaped, widest at the base,

surface often with deep longitudinal flutings; distal end with an expanded mouth, which is sometimes uniform like that of a cornet, but is usually cut into two or more triangular, petal-like, reflexed, appendages; mouth with an abundance of greyish pile.

These galls do not appear to be from leaf buds, and I have not yet found a leaf deformed by them. I have, on a few occasions, found galls growing from flower discs.

In September, 1884, I made a collection of thirty-one of these galls in Toronto High Park. Producers began to come out April 20th, 1885, and parasites some time later.

The gall, the producer and the two species of parasite bred from it, so far as I knew, were undescribed species, and I gave to the producer the provisional name *Diplosis helianthi*, and to one of the two parasites, having an unusually long ovapositor, *Torymus longior*, and to the other *Torymus helianthi*, for convenience in my collection.

A lot of forty-seven galls, collected from the banks of the Humber in the fall of 1887, gave producers and parasites from May 10th, 1888, to June 25th, 1888.

A lot of over 200 galls was collected October 9, 1892, and April, 1893. Producers emerged from May 16, 1893, to June 19, 1893, sparingly towards the last date; they were most numerous May 29 to May 31. From May 26, 1893, to June 11, *Torymus longior* emerged, ♀s preceding ♂s. From June 1 to July 7, *Torymus helianthi* emerged. From June 4 to June 9 a small parasite, a *Copidosoma*, emerged. On May 30, a pretty little tineid moth emerged; expanse of wing, 7 mm., with a deep, pale brownish fringe and two brownish lines on the primaries, commencing about the middle of the outer margin, and running backwards and inwards, but not reaching the inner margin; these brownish lines are separated by a white line of about equal width.

This tineid appears to be generically identical with inquiline species, occasionally found in willow and other galls. On May 20, one ♂ *Ormyrus*, and on June 6, a very pretty, small, straw-colored cecidomyid inquiline emerged.

Diplosis helianthi is of full generic size, of a smoky, dark

color; the wings, with abundant dark pile; the venation is typical of *diplosis*. The first longitudinal vein, slightly separated from the costa, coalesces with it about its middle; the second, curving gently backwards, reaches the tip of the wing, where it joins the stout costa, which there becomes abruptly attenuated; the third forks about the middle, one branch bending abruptly to the outer margin, the other extending upwards and outwards, touching the margin where it bends slightly inwards. There is a rudimentary vein, springing from the base of the second longitudinal vein and running some distance upwards, about midway between it and the third. I have found no trace of a cross vein between the first and second longitudinal veins. The antennæ of the ♂ is 26-jointed, that of the ♀, 14-jointed; numerous specimens.

Torymus longior has the front of the head bright brassy, with purple reflections, with five longitudinal lines of short, stubby, pale spines; eyes, pale brown; scape of antennæ, pale; occiput, bright brassy green; thorax, dull brownish green, with brassy reflections; dorsum of prothorax, bright brassy green; abdomen, dark purplish blue, with bright brassy reflections; ovapositor, more than twice as long as body and head; middle and hind femoræ, very bright steel blue, much brighter than the abdomen; all the tibiæ, pale coppery brown; tarsi, pale; claws dark; numerous specimens.

Torymus helianthi has the head of uniform bright, metallic green; eyes, pale brown; scape of antennæ, pale; thorax and abdomen, bright metallic green, abdomen with steel blue reflections; ovapositor, about as long as abdomen; legs, pale straw color; hind tibiæ, pale brown; tarsi, pale, tipped with brown; numerous specimens.

On June 23, 1893, these galls were nearly full grown, of a greenish color, similar to the stem of the plant, and of an herbaceous texture. On July 27 they were mature, rigid and hard, and of a greenish purple color. This is the most common of the three *helianthus* galls found near Toronto.

WM. BRODIE.

COLEOPTERA TAKEN IN OXFORD CO., ONT., 1892.

BY DANIEL G. COX.

IN the early part of the month of June, 1892, I spent a few days among my friends in the County of Oxford, between Blenheim and Woodstock, and during that time collected many species of Coleoptera, and, thinking it may be of some interest to our young entomologists, I append the following list of species taken, those marked with an asterisk being additions to the Canadian list :

Cicindelidæ.Cicindela 6-guttata *Fab.***Carabidæ.**Cychrus lecontei *Dej.*Calosoma calidum *Fab.*" frigidum *Kirby.*Nebria pallipes *Say.*Bembidium rupestre *Dej.*" patrulee *Dej.*" intermedium *Kirby.*" pictum *Lec.*Tachys nanus *Gyll.*Patrobus longicornis *Say.*Pterostichus honestus *Say.*" coracinus *Newm.*" lucublandus *Say.*" caudicalis *Say.*" luctuosus *Dej.*" corvinus *Dej.*" luczotii *Dej.*" erythropus *Dej.*" patruelis *Dej.*" lacrymosus *Newm.*Amara pallipes *Kirby.*" impuncticollis *Say.*" interstitialis *Dej.*" obesa *Say.*Diplochila major *Lec.*" impressicollis *Dej.*Dicælus teter *Bon.*" politus *Dej.*Calathus gregarius *Say.*Platynus sinuatus *Dej.*" extensicollis *Say.*" melanarius *Dej.*" cupripennis *Say.*" nutans *Say.*" placidus *Say.*" ruficornis *Lec.*Lebia atriventris *Say.*Brachynus perplexus *Dej.*" fumans *Fab.*Chlænus sericeus *Forst.*" pennsylvanicus *Say.*" tomentosus *Say.*Anomoglossus emarginatus *Say.*Agonoderus pallipes *Fab.*Harpalus viridiæneus *Beauv.*" pleuriticus *Kirby.*Stenolophus conjunctus *Say.*Anisodactylus discoideus *Dej.*" baltimorensis *Say.***Silphidæ.**Necrophorus marginatus *Fab.*" tomentosus *Web.*Silpha lapponica *Hbst.*" inæqualis *Fab.*" novaboracensis *Forst.*" americana *Linn.***Staphylinidæ.**Aleochara lata *Grav.*Listotrophus cingulatus *Grav.*Creophilus maxillosus *Grav.*

Philonthus cyanipennis *Fab.*

Stenus, sp.

Pæderus littorarius *Grav.*

Coccinellidæ.

Anisosticta strigata *Thunb.*

Hippodamia 5-signata *Kirby.*

" *13-punctata* *Linn.*

" *parenthesis* *Say.*

Coccinella trifaciata *Linn.*

" *9-notata* *Hbst.*

" *tricuspis* *Kirby.*

Adalia bipunctata *Linn.*

Psyllobora 20-maculata *Say.*

Chilocorus bivulnerus *Muls.*

Erotylidæ.

Dacne 4-maculata *Say.*

Megalodacne heros *Say.*

Mycotretus sanguinipennis *Say.*

Tritoma thoracica *Say.*

Colydiidæ.

Philothermus glabriculus *Lec.*

Cucujidæ.

Silvanus imbellis *Lec.*

Brontes dubius *Lec.*

Cryptophagidæ.

Atomaria, sp.

Mycetophagidæ.

Mycetophagus punctatus *Say.*

" *flexuosus* *Say.*

Triphyllus humeralis *Kirby.*

Dermestidæ.

Orphilus glabratus *Fab.*

Histeridæ.

Hister lecontei *Mars.*

Nitidulidæ.

Nitidula bipustulata *Linn.*

" *rufipes* *Linn.*

Phenolia grossa *Fab.*

Omosita colon *Linn.*

Elateridæ.

Alaus myops *Fab.*

Cryptohypnus abbreviatus *Say.*

Elater linteus *Say.*

" *nigricans* *Germ.*

" *sanguinipennis* *Say.*

" *apicatus* *Say.*

Dolopius lateralis *Esch.*

Lampyridæ.

Ellychina corrusca *Linn.*

Telephorus, sp.

Cleridæ.

**Necrobia violaceus* *Linn.*

Lucanidæ.

Lucanus dama *Thunb.*

Ceruchus piceus *Web.*

Passalus cornutus *Fab.*

Scarabæidæ.

Aphodius fossor *Linn.*

Chrysomelidæ.

Xanthonia 10-notata *Say.*

Chrysomela bigsbyana *Kirby.*

Gastroidea polygona *Linn.*

**Lina lapponica* *Linn.*

* " *scripta* *Fab.*

Phyllodecta vulgatissima *Linn.*

Galerucella sagittariæ *Gyll.*

Haltica ignita *Ill.*

Crepidodera helxines *Linn.*

**Longitarsus montivagus.*

